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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/001,315	10/24/2001	Gregory D. VanWiggeren	10010111-1	2348

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AGILENT TECHNOLOGIES, INC.
Legal Department, DL429
Intellectual Property Administration
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EXAMINER

CHANG, AUDREY Y

ART UNIT	PAPER NUMBER
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2872

DATE MAILED: 12/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/001,315

Applicant(s)

VANWIGGEREN ET AL.

Examiner

Audrey Y. Chang

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AW

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-6, 8-12, 14 and 16-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-6, 8-12, 14 and 16-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Remark

- This Office Action is in response to applicant's amendment filed on September 29, 2003, which has been entered as paper number 5.
- By this amendment, the applicant has amended claims 2-6, 8-10, 12, 18, has canceled claims 1, 7, 13 and 15, and has newly added claims 21-23.
- Claims 2-6, 8-12, 14, and 16-23 remain pending in this application.
- The objection to the drawings set forth in the previous Office Action is withdrawn in response to applicant's amendment.
- The objections to the claims set forth in the previous Office Action are withdrawn in response to applicant's amendment.

Claim Objections

1. Claims 16-19 are objected to because of the following informalities:

(1) Claims 16-19 are dependent from a *canceled* claim (15), which makes the scopes of the claims unclear.

(2) The dependency of claim 16 is unclear here since it is currently dependent from a canceled claim. It is *also unclear* how could the first hologram in the first para-electric holographic medium be capable of "focusing" light to different locations (first and second locations). The specification only gives the support for a single hologram to be switched between a focusing state to focus light to one location and a non-focusing state. The same hologram cannot focus light to two different locations.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 2-6, 8-11, 12, 14, and 16-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over the patent issued to Popovich (PN. 6,356,366) in view of the patent issued to De Vre et al (PN. 5,640,256).**

Popovich teaches a *holographic light focusing device* that is comprised of a *light focusing system* (12, Figure 1), serves as *the optical device*, wherein the light focusing system includes a *first switchable holographic optical element* (26), serves as the *first hologram* in a first hologram medium, that is capable of being switched between a *first active state* for diffracting and *focusing* the incident light to a *first location* (Q, Figure 1), which is an *off-axis direction* with respect to the optical axis of the first hologram, and a first passive state wherein the incident light is not diffracted which passes through along a second direction in general *along* the optical axis. Popovich further teaches that the light focusing system comprises a second switchable holographic optical element (such as 28 or 30), wherein the second switchable holographic element is switchable between a *second active state* for diffracting and focusing the incident light to a *second location* (or third location) (such as Y and Z, Figure 1), that is *along* the optical axis of the light focusing system and a second passive state for not diffracting the light.

This reference has met all the limitations of the claims. Popovich teaches that the holographic medium is a dispersed liquid crystal medium wherein the diffractive or active state of the recorded hologram is activated when the applied electrical field is zero. It does not teach explicitly that the holograms are in their active mode when non-zero electrical fields are applied to the holographic medium

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and it does not explicitly teach that the holographic medium is a *para*-electric holographic medium. De Vre et al in the same field of endeavor teaches a switchable hologram that is recorded in a para-electric medium such as photorefractive crystal (LiNbO_3) having refractive index controlled medium when under the application of electrical field, (please see column 5, lines 40-45). De Vre et al teaches that the recorded holographic grating is activated to have diffractive function when a non-zero electrical field is applied across the holographic medium, (please see column 9, lines 45-60). It would then have been obvious to one skilled in the art to apply the teachings of De Vre et al to modify the holographic medium of Popovich to use a para-electric medium with holographic grating stored within being activated by applying non-zero electrical field for the benefit of providing an alternative design and structure for the switchable holographic light focusing system. Since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

With regard to claims 5-6, and 17, Popovich teaches that each of the holographic optical elements (26, 28 and 30), comprises a hologram recorded within a holographic recording medium such as photopolymeric film that is interposed between a pair of *electrodes* (60) such that an electric circuit (68) is used to drive electrical field across the electrodes and therefore the holographic recording medium for switching the hologram, (please see Figure 3 and column 4, lines 44-67).

Popovich further teaches that the holographic light-focusing device could be used within an endoscope such that light transmission medium including optical fiber (48) could be used to transmit the light to the holographic light-focusing device. Although it does not teach explicitly to use output transmission medium such as optical fibers to receive the light at different locations, such modification would have been obvious to one skilled in the art for the benefit of directing the light to further desired locations since optical fibers are well known light transmission means in the art.

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Response to Arguments

4. Applicant's arguments with respect to amended claims have been considered but are moot in view of the new ground(s) of rejection. The newly amended and added features have been fully considered and they are rejected for the reasons stated above.

5. Applicant's arguments are mainly drawn to the amended features and they have been fully addressed in paragraphs above.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

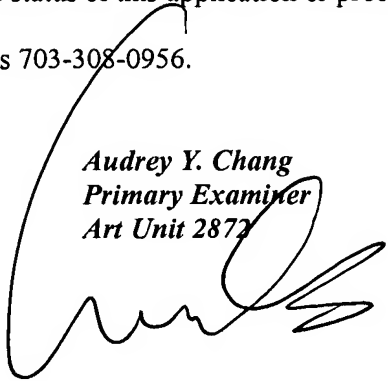
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Audrey Y. Chang whose telephone number is 703-305-6208. The examiner can normally be reached on Monday-Friday (8:00-4:30), alternative Mondays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on 703-305-0024. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

Audrey Y. Chang
Primary Examiner
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A large, stylized handwritten signature in black ink, which appears to be 'Audrey Y. Chang', is written over the typed name and title.

A. Chang, Ph.D.